

CLAIM SUMMARY DOCUMENT

The following listing of claims will replace all prior versions and listings of claims in this application.

1. (Withdrawn) A medical pump monitor *system* using a plurality of medical pumps to administer medical fluids and the like for a patient, monitoring flows of delivered fluids and alarm information of the medical pumps through cable communication and/or wireless communication,

wherein infusion circuitry creating means for setting/changing the connection conditions of infusion lines from the plurality of medical pumps, and administration passes and/or administration positions for the patient is provided, and it is made possible to display infusion circuitry data created in the infusion circuitry creating means on a monitor screen by operations by an operator of the medical pump monitor system.

2. (Withdrawn) The pump monitor system according to claim 1, wherein reading means for reading an infusion circuitry diagram such as a handwritten diagram in the medical pump monitor system is provided, and it is made possible to make a choice by operator's operations on whether infusion circuitry information to be displayed during operation of the medical pump monitor system is information created using the infusion circuitry creating means or information created using said infusion circuitry diagram reading means.

3. (Withdrawn) The medical pump monitor system according to claim 1, wherein said infusion circuitry creating means displays a sketch of the patient with respect to determination of the administration position for the patient, and inputting in the medical pump monitor system any position information in the sketch, thereby making a determination as administration closest to the inputted position information.

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4. (Withdrawn) The medical pump monitor system according to claim 1, wherein said infusion circuitry creating means further comprises determining means for making a check for the infusion line not suited to a practical method for transfusion.

5. (Withdrawn) The medical pump monitor system according to claim 1, wherein said fluid delivery circuitry creation means can select an optimal pump arrangement pattern from a plurality of pump arrangement patterns registered in advance.

6. (Withdrawn) The medical pump monitor system according to claim 1, wherein the determining means makes a determination on existence of loop-shaped lines in the infusion line, and gives an alarm to the operator if there exist a loop shaped line.

7. (Withdrawn) The medical pump monitor system according to claim 1, wherein the determining means determines whether two or more of the infusion lines run directly from the medical pump, and gives an alarm to the operator if two or more of infusion lines run directly therefrom.

8. (Withdrawn) The medical pump monitor system according to claim 1, wherein the determining means determines whether the infusion line is ended at some midpoint without reaching the patient, and gives an alarm to the operator of the medical pump monitor system if the infusion line is ended at some midpoint.

9. (Withdrawn) The medical pump monitor system according to claim 1, wherein the determining means determines whether the infusion line is necessarily formed towards at least one position of the patient from the medical pump, and gives an alarm to the operator if the infusion line is not necessarily formed towards at least one position of the patient from the medical pump.

10. (Withdrawn) The medical pump monitor system according to claim 1, wherein the determining means determines whether the infusion line inserted into a specified portion of the patient is inserted into the patient again, and gives an alarm to the operator if the infusion line inserted into a specified portion of the patient is inserted into the patient again.

11. (Withdrawn) The medical pump monitor system according to claim 1, wherein the determining means determines whether the infusion line from the operating medical pump is not connected to the patient, and gives an alarm to the operator if the infusion line from the operating medical pump is not connected to the patient.

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B, 12. (Withdrawn) The medical pump monitor system according to claim 1, wherein the monitor screen can display thereon real-time states or trends in arbitrary time ranges for at least any one of the amount of water, the urinary volume and the amount of electrolytes.

13. (Withdrawn) A controlling method for a medical pump monitor system using a plurality of medical pumps to administer medical fluids and the like for a patient, monitoring flows of delivered fluids and alarm information of the medical pumps through cable communication and/or wireless communication, comprising:

an infusion circuitry creating step of setting/changing the connection conditions of infusion lines from the plurality of medical pumps, and administration passes and/or administration positions for the patient; and

a step of making it possible to display infusion circuitry data created in the infusion circuitry creating means on a monitor screen by operations by an operator of the medical pump monitor system.

14. (Withdrawn) A computer readable memory storing therein program codes for controlling a medical pump monitor system using a plurality of medical pumps to administer medical fluids and the like for a patient, monitoring flows of delivered fluids and alarm information of the medical pumps through cable communication and/or wireless communication, comprising program codes of:

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an infusion circuitry creating step of setting/changing the connection conditions of infusion lines from the plurality of medical pumps, and administration passes and/or administration positions for the patient; and

a step of making it possible to display infusion circuitry data created in the infusion circuitry creating means on a monitor screen by operations by an operator of the medical pump monitor system.

15. (Currently Amended) A real-time monitoring system for performing real time communication with external apparatuses including a plurality of medical apparatuses, and controlling the external apparatuses and/or displaying conditions of the external apparatuses, comprising:

a communication unit adapted for communicating with the external apparatuses;

a display unit adapted for displaying the conditions of the external apparatuses;

a control unit adapted for controlling contents to be displayed on the display unit;

a storage unit adapted for storing one or more past communication data obtained by the communication unit; and

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B, a comparison unit adapted for comparing currently communicated data with past data stored in said storage unit and either outputting a non-change signal of predetermined data size smaller than the size of data output in case that the past data and the currently communicated data are not identical or inhibiting output of a signal to the control unit when the past data and the currently communicated data are identical.

16. (Canceled)

17. (Previously Presented) The real-time monitoring system according to claim 15, wherein the communication unit, the comparison unit and the storage unit are unified, and are separated from the display unit and the control unit.

18. (Previously Presented) The real-time monitoring system according to claim 15, wherein the external apparatuses is medical apparatuses comprising communicating means including at least any one of a liquid delivery pump and urinary volume meter, and the contents that are displayed on the display unit include

at least any one of operation and stop information, flows, alarm conditions from apparatuses, information of used drugs, administration information and patient information.

19. (Currently Amended) A controlling method for a real-time monitoring system for performing real time communication with external apparatuses including a plurality of medical apparatuses, and controlling the external apparatuses and/or displaying the conditions of the external apparatuses, comprising:

storing in a storage unit one or more past communication data obtained by a communication unit for communicating with the external apparatuses;

controlling contents to be displayed on a display unit by a control unit;

comparing currently communicated data with past data stored in said storage unit by a comparison unit; and

outputting a non-change signal of predetermined data size smaller than the size of data output in case that the past data and the currently communicated data are not identical or inhibiting output of a signal to the control unit when the past data and the currently communicated data are identical.

20. (Canceled)

21. (Withdrawn) A computer readable record medium storing therein program codes of a controlling method for a real-time monitoring system performing real time communication with external apparatuses including one or more medical apparatuses, and controlling the external apparatuses and/or displaying the conditions of the external apparatuses, comprising program codes of steps of:

storing in storing means one or more past communication data obtained by communicating means for communicating with the external apparatuses;

comparing currently communicated data with past data by comparing means;

and


controlling contents to be displayed on the displaying means, based on signals from the comparing means,

wherein said computer readable record medium comprises a program code of a controlling step in which the comparing means performs control to reduce the amount of the data and/or eliminate the amount of the data for the amount of signals to be sent to the controlling means, in the case where the past data and the current data are identical to each other in comparison with the case where the past data and the current data are different from each other.

22. (Withdrawn) A computer readable record medium storing therein program codes of a controlling method for a real-time monitoring system performing real time communication with external apparatuses including one or more medical

apparatuses, and controlling the external apparatuses and/or displaying the conditions of the external apparatuses, comprising program codes of steps of:

storing in storing means one or more past communication data obtained by communicating means for communicating with the external apparatuses;

 comparing currently communicated data with past data by comparing means;
and

controlling contents to be displayed on the displaying means, based on signals from the comparing means,

wherein said computer readable record medium comprises a program code of a step in which the comparing means selectively sends only a portion where the past data and the current data are different from each other, for the signals to be sent to the controlling means.
